

I. COPELAND.  
Wringing-Machine Clamp.

No. 217,447.

Patented July 15, 1879.

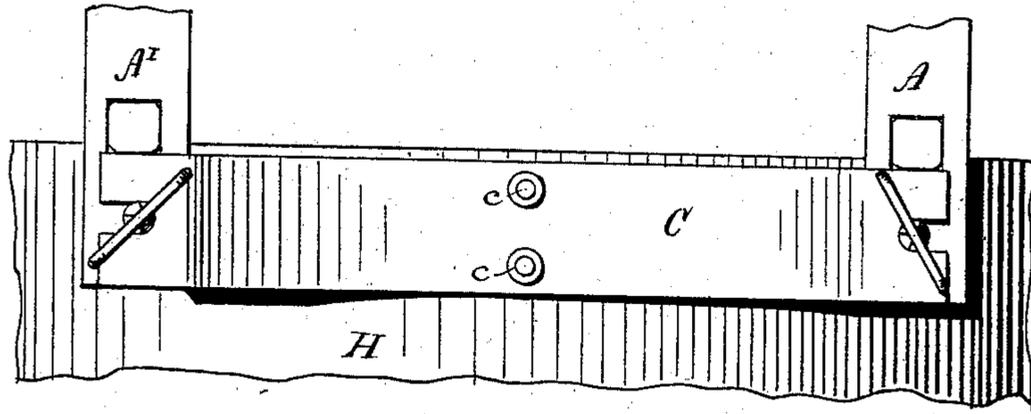


Fig. 1.

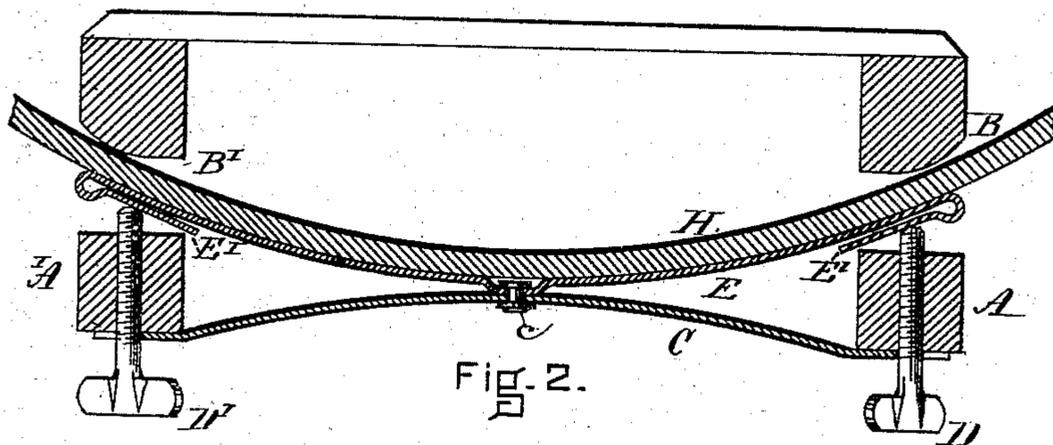


Fig. 2.

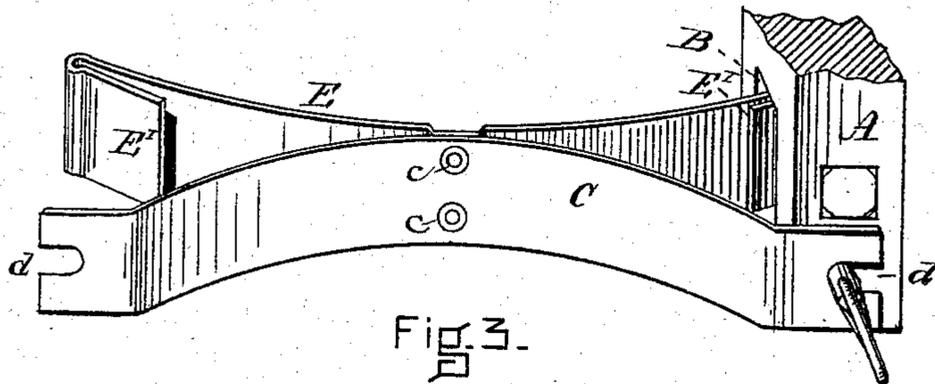


Fig. 3.

WITNESSES.  
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## IMPROVEMENT IN WRINGING-MACHINE CLAMPS.

Specification forming part of Letters Patent No. **217,447**, dated July 15, 1879; application filed December 2, 1878.

*To all whom it may concern:*

Be it known that I, IRA COPELAND, of Brockton, county of Plymouth, State of Massachusetts, have invented an Improvement in Wringing-Machine Clamps, of which the following is a specification.

My invention relates to the arrangement and construction of the parts that form the adjustable portion of the clamp, consisting, essentially, of peculiarly-constructed shields to prevent the clamping set-screws from injuring the tub or sink, at the same time giving a firm hold, said shields being attached to the machine by means of flexible shanks fastened midway between the end pieces of the machine.

The two shields with their two shanks and points of attachment are made from a single oblong strip of thin spring metal.

Referring to the drawings, Figure 1 is an elevation of my clamp. Fig. 2 is a horizontal section of the same. Fig. 3 is a perspective view, showing one end of the clamping-strip, together with the bifurcated portion of one of the end pieces of the wringer, while the other end is shown free from the wringer, so as to show its structure.

In the drawings, H, Figs. 1 and 2, represents a section of a tub or other receptacle. This may be curved, as shown, or it may be straight, as my flexible shank and shield are adapted to both forms.

C, Figs. 1, 2, 3, is a strip of sheet spring metal, formed as shown, and provided with slots *d d* at the ends, through which the thumb-screws D D' pass, as shown. This strip C is employed as a medium of attachment for the clamping-strip E, Figs. 2 and 3, the two being fastened together at their centers, as shown at *e e*, Figs. 1, 2, and 3.

E, Figs. 2 and 3, represents the clamping-strip, consisting of the two shields E' E', with their shanks, said shanks serving to connect the two shields to the supporting device.

E' E', Figs. 2 and 3, represent the shields, while the intervening portion of the strip E represents their combined shanks.

A A', Figs. 1, 2, and 3, represent the lower portions of the two end pieces of the wringer.

BB', Figs. 2 and 3, represent the bifurcations of the end pieces, which receive the edge of the tub or sink.

In constructing the shield portions of the clamping-strip E, the oblong strip of spring metal, when properly heated, is folded back upon itself at the ends in such a manner as to form a tubular fold and a closely-laminated seat for the set-screw at each end.

Without doubling this sheet of spring metal E, under the combined action of the screw on one side and the wood of the tub on the other, would soon become swaged into conformity to the end of the screw, and would present a small bearing-surface to the tub, which would mar it and hold far less effectually.

The shank portion of the strip E should be single, (or of a character easily deflected,) in order to give that degree of flexibility requisite to allow the shield portions to be easily brought into proper position on the variously-formed tubs and sinks, which, in case of straight-sided ones, necessitates a compound curve in the shank, first toward and then from the sink.

In attaching the strip E to the wringer, the shield portions are placed in the bifurcations of the end pieces with the reflex portions in contact with the inner ends of the thumb-screws, while the central portion is sprung somewhat forward of the line of the inside edge of the legs of the machine, and there fastened to a suitable support, so that when affixed to the machine said strip is always under more or less tension, which tension causes the shields to remain always in contact with the ends of the thumb-screws, and to follow their motions forth and back within the bifurcations.

The strip C illustrates the support for the clamping-strip E. It is made of flexible spring metal, so that it may be forced forward sufficiently to bring the strip E outside of a tub of sharp curvature.

I claim—

The spring-metal tension clamping-strip E, provided with re-enforced or duplex shield portions E' E', in combination with the end pieces A A', thumb-screws D D', and a spring-metal supporting-strip, substantially as described, and for the purpose set forth.

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Witnesses:

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